Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-10. (CANCELED)

11. (CURRENTLY AMENDED) An ordered array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of [[a]] an unique sequence of interest extending in the array's z dimension, wherein each copy has an identical generic oligonucleotide that is attached to the array's x and y coordinates and wherein each copy also carries [[a]] the unique sequence of interest repeated at least two times in the z dimension of the array and wherein between each of the unique sequence of interest there is at least one region that is complementary to at least a portion of the identical generic oligonucleotide attached to the array's x and y coordinates produced by:

(a) providing: i) a solid support comprising a plurality of positions for oligonucleotides, said positions defined by x and y coordinates; ii) a plurality of identical generic oligonucleotides, each oligonucleotide comprising a sequence, wherein said oligonucleotide comprises a 5' end which is attached to the solid support and a 3' end ; and iii) a plurality of unique circular DNA templates, each circular DNA template comprising [[a]] an unique sequence of interest and a region complementary to at least a portion of said sequence of said oligonucleotide, said unique sequence of interest being different for each circular DNA template;

(b) immobilizing one oligonucleotide from said plurality of identical oligonucleotides in each of said positions on said solid support to create an ordered array comprising a plurality of identical immobilized oligonucleotides, each of which is described by its position defined by its x and y coordinates;

(c) adding to each immobilized oligonucleotide of said ordered array a circular DNA template from said plurality of said ~~unique~~ circular DNA template[[s]] comprising the unique sequence of interest under conditions such that each immobilized oligonucleotide hybridizes to [[a]] the circular DNA template to create a plurality of circular templates hybridized to immobilized oligonucleotides at positions defined by their x and y coordinates, each circular template comprising a different unique sequence of interest; and

(d) extending each of said hybridized immobilized oligonucleotides using a polymerase to create an ordered array of extended immobilized oligonucleotides, wherein each extended immobilized oligonucleotide has a position on the array defined by its x and y coordinates, and is extended in the z dimension, a growing strand, such that each extended immobilized oligonucleotide comprises at least two copies of said unique sequence of interest extending in the z dimension by [[a]] the circular DNA template having [[a]] the unique sequence of interest, wherein said unique sequence of interest has a different sequence corresponding to [[a]] an unique portion of [[the]] a target sequence, whereby the end of the sequence extending in the z-dimension of each extended immobilized oligonucleotide is unique ~~corresponds to the unique portion of the target~~.

12-22. (CANCELED)

23. (PREVIOUSLY PRESENTED) An ordered array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of a sequence of interest extending in the array's z dimension, wherein each copy has a different unique sequence attached to the array's x and y coordinates, each different sequence being complementary to the sequence of interest, wherein at least two copies of the different unique sequence are repeated along the z dimension of the array produced by:

a) providing: i) a solid support comprising a plurality of positions for oligonucleotides, said positions defined by x and y coordinates; and ii) a plurality of pairs of corresponding oligonucleotides and circular DNA templates, wherein each circular DNA template comprises a sequence of interest, and at least two of said sequence of interest are different, and the corresponding oligonucleotide for each circular DNA template comprises a sequence, wherein said oligonucleotide comprises a 5' end which is attached to the solid support and a 3' end, and further wherein said oligonucleotide comprises a sequence complementary to a portion of the sequence of interest on the corresponding circular DNA template;

b) immobilizing one oligonucleotide in each of said positions on said solid support to create an ordered array comprising a plurality of immobilized oligonucleotides, each of which is described by its position defined by its x and y coordinates;

c) adding to each immobilized oligonucleotide of said ordered array a corresponding circular DNA template under conditions such that said immobilized oligonucleotide hybridizes to said corresponding circular DNA template to create a plurality of circular templates each of which is hybridized to its corresponding immobilized oligonucleotide at a position defined by its x and y coordinates; and

d) extending said hybridized immobilized oligonucleotides using a polymerase to create an ordered array of extended immobilized oligonucleotides, wherein each extended immobilized oligonucleotide has a position on the array defined by its x and y coordinates, and is extended in the z dimension such that each extended immobilized oligonucleotide comprises at least two copies extending at the terminus in the direction of the z dimension, a growing strand, of the sequence of interest contained in said hybridized circular template by a circular DNA template having [[a]] an unique sequence of interest, wherein said unique sequence of interest has a different sequence corresponding to [[a]] an unique portion of a target sequence, whereby the 3' terminus extending in the direction of the z-dimension of each extended immobilized oligonucleotide corresponds to the unique portion of the target.

24. (CURRENTLY AMENDED) The ordered array of claim 11, wherein said ordered array has at least three copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the same generic nucleic acid sequence.

25. (CURRENTLY AMENDED) The ordered array of claim 11, wherein said ordered array has at least 10 copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the same generic nucleic acid sequence.

26. (CURRENTLY AMENDED) The ordered array of claim 11, wherein said ordered array has at least 50 copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the same generic nucleic acid sequence.

27. (CURRENTLY AMENDED) The ordered array of claim 23, wherein said ordered array has at least three copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the second, identical nucleic acid sequence.

28. (CURRENTLY AMENDED) The ordered array of claim 23, wherein said ordered array has at least 10 copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the second, identical nucleic acid sequence.

29. (CURRENTLY AMENDED) The ordered array of claim 23, wherein said ordered array has at least 50 copies of the unique sequence of interest extending in the Z dimension separated by [[a]] the second, identical nucleic acid sequence.

30. (CURRENTLY AMENDED) An ordered array of immobilized oligonucleotides in the array's x and y coordinates with multiple copies of [[a]] an unique sequence of interest extending in the array's z dimension comprising.

a solid support comprising a substrate, wherein said substrate contains i) a plurality of positions for oligonucleotides, said positions defined by x and y coordinates, and ii) a plurality of extended oligonucleotides immobilized on the substrate which extend into the z coordinate, wherein each extended immobilized oligonucleotide comprises [[a]] an unique sequence of interest, wherein each of the unique sequence of interest is different for each extended immobilized oligonucleotide and corresponds to a portion of a target, and wherein each extended immobilized oligonucleotide comprises at least two copies of said unique sequence of interest separated by at least one generic nucleic acid sequence such that the array has redundancy of at least two copies of each of the unique sequence of interest separated by a generic nucleic acid sequence in the terminus extending to the direction of the z-dimension.

31. (CURRENTLY AMENDED) The ordered-array of claim 30, wherein each extended immobilized oligonucleotide comprises at least three copies of said unique sequence of interest separated by at least two copies of a generic nucleic acid sequence.

32. (CURRENTLY AMENDED) The ordered array of claim 30, wherein each extended immobilized oligonucleotide comprises at least 10 copies of said unique sequence of interest separated by a same generic nucleic acid sequence.

33. (CURRENTLY AMENDED) The ordered array of claim 30, wherein each extended immobilized oligonucleotide comprises at least 50 copies of said unique sequence of interest separated by a same generic nucleic acid sequence.

34. (CURRENTLY AMENDED) The ordered array of claims 11 and 23, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the unique sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising at least two copies of the unique sequence of interest along the z coordinate separated by [[a]] the same generic nucleic acid sequence.

35. (CURRENTLY AMENDED) The ordered array of claims 25, 26, 27, 28, and 29, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the unique sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising the unique sequence of interest along the z coordinate.

36. (CURRENTLY AMENDED) The ordered array of claims 30, 31, 32, and 33, wherein at least two copies of a template nucleic acid or a fragment thereof corresponding to the unique sequence of interest are hybridized to at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.

37. (CURRENTLY AMENDED) The ordered array of claim 32, wherein at least ten copies of a template nucleic acid or a fragment thereof are hybridized to said corresponding unique sequence of interest of at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.

38. (CURRENTLY AMENDED) The ordered array of claim 33, wherein at least fifty copies of a template nucleic acid or a fragment thereof are hybridized to said corresponding unique sequence of interest of at least one of the extended immobilized oligonucleotides comprising the sequence of interest along the z coordinate.